

ABSTRACT

A biodegradable common bile duct stent and the method for preparing thereof are provided. The stent is made of biodegradable polymeric material with incorporation of X-ray opaque components. The stent adapt to anatomic shape of CBD or it can be sutured together with the wall of the bile duct. After placing in the duct, it maintains its position and does not slip. The circular tube of the stent being suitably sized and having multiple ring-shaped protruding rims at the outer wall and/or with larynx structure, leakage and outflow of the bile are thereby prevented.

The process for manufacturing the stent comprises the following steps: (1) mixing and pelletizing of biodegradable polymer, X-ray opaque components and processing additives; (2) injection molding or extrusion-blowing followed by polishing of the exterior surface. In surgical operation on bile duct, the stent can replace the T-tube which is conventionally used to support the duct and guide bile drainage. It can reduce the time required for surgical operation and treatment, reduce possible complications and can be degraded and eliminated as the incision heals and the CBD regains its normal functions.